

REMARKS

The specification has been corrected on pages 8 and 11 to delete the reference to number "6a" and to include a reference to the letter "B". In addition, a proposed amendment to Figure 1 has been submitted to delete the reference to "A-A".

The rejection of claims 4 to 6 under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is respectfully traversed. Claim 4 has been amended to overcome the objections raised by the Examiner. Claim 4 is now believed to be satisfy all of the requirements of 35 USC 112 and the rejection thereof under 35 USC 112 should be withdrawn.

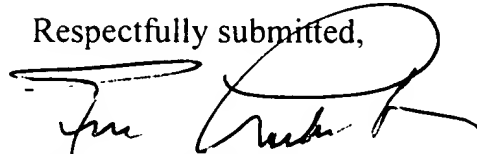
The rejection of claims 4 and 5 under 35 USC 102(b) as being anticipated by Shinkawa, et al (U.S. Patent 4,938,930) is respectfully traversed.

Applicant has amended claim 4 to clarify the invention and to clearly distinguish the subject invention from the cited reference, Shinkawa, et al. The reactor of the subject invention is a triple-pipe structure which comprises a reaction tube 3, an inner tube 6 and a central tube 7, all as shown in Figure 1. The unreacting gas is fed at low temperature from the central tube 7 directly into the upper part of the catalytic layer by passing through a passageway formed between the central tube and the inner tube. The central tube is of a length shorter than the length of the reaction tube to form this passageway. Feeding the unreacted gas into the upper part of the catalytic layer effectively cools the temperature distribution as shown in Figure 3. Additionally, since the temperature level is equalized for the whole catalytic layer, the methanol generation rate can be improved by the effective utilization of the catalyst filled in the wake region. The Shinkawa, et al apparatus does not disclose a reactor as claimed wherein the unreacting gas flows from the upper part of the catalytic layer downwardly.

For all of the above reasons, claims 4 to 6 as amended are clearly patentable over Shinkawa, et al.

Reconsideration and allowance of claims 4 to 6 is respectfully solicited.

Respectfully submitted,



Eugene Lieberstein
Reg. No. 24,645

ANDERSON, KILL & OLICK
1251 Avenue of the Americas
New York, New York 10020-1182
(212) 278-1000

MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed: Commissioner of Patents & Trademarks, Washington, DC 20231 on August 5, 2001

